

Abstract

[0135] A method for modulating a polarization-multiplexed optical clock signal for an optical communication system is described. The method includes splitting a linearly polarized input optical clock signal having a clock rate into a first and a second linearly polarized optical signal. The first linearly polarized optical signal comprises a first polarization state and the second linearly polarized optical signal comprises a second polarization state. The first linearly polarized optical signal is delayed relative to the second linearly polarized optical signal. The first and the second linearly polarized optical signals are combined to generate the polarization-multiplexed optical clock signal for the optical communication system. The polarization-multiplexed optical clock signal is then modulated with a polarization-insensitive optical modulator to encode data on the polarization-multiplexed optical clock signal.

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